IN THE CLAIMS:

1. (Currently Amended): A manufacturing apparatus of a buried insulating layer-type semiconductor silicon carbide substrate, comprising: a heating furnace in which an SOI substrate having a surface silicon layer of a predetermined thickness and having a buried insulator is placed and which has a heating means for heating the SOI substrate; and a gas supply means for supplying a variety of gases into this heating furnace; and

an exhaust means for exhausting gases within the heating furnace to outside,

wherein the manufacturing apparatus is configured to control the heating means and the gas supply means

in order to increase an ambient temperature within said heating furnace up to between 1,200 and 1,405°C while supplying a mixed gas of a hydrogen gas and of a hydrocarbon gas into said heating furnace so as to metamorphose said surface silicon layer of the SOI substrate into a single crystal silicon carbide thin film, ~~and~~

~~in that a series of reactions within said heating furnace are conducted at atmospheric pressure~~

in order to maintain the metamorphosing state for a period of time of between several minutes and several hours so as to deposit a carbon film on said single crystal silicon carbide thin film,

in order to replace said mixed gas with an inert gas wherein an oxygen gas is mixed in a predetermined ratio and heat said SOI substrate up to 550°C or higher so as to

remove said carbon thin film through etching .

2. (Canceled):

3. (Previously presented): The manufacturing apparatus of a buried insulating layer-type semiconductor silicon carbide substrate,comprising:

a heating furnace in which an SOI substrate having a surface silicon layer of a predetermined thickness on an insulator layer buried in the substrate, the heating furnace including a heating means for heating the SOI substrate; and

a gas supply means for supplying a variety of gases into this heating furnace,

wherein the manufacturing apparatus is configured to control the heating means and the gas supply means

in order to increase an ambient temperature within said heating furnace up to between 1,200 and 1,405 °C while supplying a mixed gas of a hydrogen gas and of a hydrocarbon gas into said heating furnace so as to metamorphose said surface silicon layer of the SOI substrate into a single crystal silicon carbide thin film,

in order to maintain the metamorphosing state for a period of time of between several minutes and several hours so as to deposit a carbon film on said single crystal silicon carbide thin film,

in order to replace said mixed gas with an inert gas wherein an oxygen gas is mixed in a predetermined ratio and heat said SOI substrate up to 550°C or higher so as to

remove said carbon thin film through etching,

in order to replace said inert gas with a pure inert gas into which no oxygen gas is mixed, increase the ambient temperature within said heating furnace up to between 500 and 1,405 °C and supply a hydrogen gas and a silane-based gas into the heating furnace under a condition wherein said ambient temperature is maintained so as to grow a new single crystal silicon carbide thin film on said single crystal silicon carbide thin film.

4. (Previously presented): The manufacturing apparatus of a buried insulating layer-type semiconductor silicon carbide substrate according to claim 3, wherein the apparatus is provided with an exhaust means for exhausting gases within said heating furnace to the outside.

5. (Previously presented): A manufacturing apparatus of a buried insulating layer-type semiconductor silicon carbide substrate according to claim 4, wherein a series of reactions within said heating furnace are conducted at atmospheric pressure.

6. (Previously presented): A manufacturing apparatus of a buried insulating layer-type semiconductor silicon carbide substrate according to claim 3, wherein a series of reactions within said heating furnace are conducted at atmospheric pressure.